

### **REMARKS**

The Examiner has rejected claim 1 under 35 U.S.C. 101 as directed to non-statutory matter. The Examiner also rejected claims 1, 4-8, and 17-20 under 35 U.S.C. 103(a) as being unpatentable over Hall- Tipping (US 5,001,632) and further in view of Stratton et al.

Applicant respectfully traverses the rejections with the following amendments and arguments:

### **35 U.S.C. § 101**

The Examiner rejected claim 1 under 35 U.S.C. 101 as being directed to non-statutory subject matter because the claimed invention does not have a sufficient tie to any machine, article of manufacture or a composition of matter.

Claim 1 has been amended to include a “control system”. Thereby tying claim 1 to a machine or article of manufacture. Support for this amendment can be found at page 17, lines 3-6 and page 18, lines 1-13. Applicant believes that this amendment overcomes the 35 U.S.C. 101 rejection.

### **35 U.S.C. § 103**

The Examiner rejected claims 1, 4-8, and 17-20 under 35 U.S.C. 103(a) as being unpatentable over Hall- Tipping (US 5,001,632) and further in view of Stratton et al.

#### *With Regards to Independent Claims 1 and 17*

Hall-Tipping describes an exercise device such as an exercise bike that is hooked up to a video game. The video game acts to keep the user exercising at a predetermined heart rate. The heart rate is determined by using the formula: 220-the user’s age. The user is led by the video game through a warm up, exercise and a cool down. In order to keep the user’s heart rate within the given range, the video game either speeds up or slows down the characters in the game. The speed of the user’s character is controlled by how fast the user pedals on the bike. If the user’s character is pursuing a character in the game, and the user’s heart rate drops too low, then the character that the user’s character is pursuing may speed up so that the user has to pedal the bike faster.

Claims 1 and 17 has been amended in order to better illustrate the differences between the applicant's invention, Hall-Tipping and Stratton et al. Claim 1 describes a method involving "a control system determining for a given activity a point of efficiency of a trainable subject with respect to at least one parameter, said point of efficiency occurring just prior to the trainable subject no longer being able to accommodate additional stress and entering a state of inefficiency or exhaustion causing the at least one parameter to vary differently than before; a control system determining a range of tolerance surrounding the point of efficiency; and training said trainable subject within said range of tolerance of said point of efficiency with respect to a state of accommodation until a state of inefficiency with respect to said at least one parameter or exhaustion occurs." Support for this amendment can be found on page 13 at lines 9-14 and lines 4-5. Support for the term "exhaustion" can be found on page 18 at line 14.

Claim 17 describes a method comprising: "providing a performance system; activating the performance system; recording at least one parameter of the performance system; measuring at least one parameter of a subject; determining an at least one point of efficiency parameter of the subject with respect to a state of accommodation by changing the at least one parameter of the performance system until the at least one parameter of the subject substantially changes beyond a given tolerance function; determining a range of tolerance surrounding the point of efficiency, said point of efficiency occurring just prior to the subject no longer being able to accommodate additional stress and entering a state of inefficiency or exhaustion causing the at least one parameter of the subject to vary differently than before; and training the subject within said range of tolerance of the point of efficiency so the duration the subject can maintain

the point of efficiency changes.” Support for this amendment can be found on page 13 at lines 9-14 and lines 4-5. Support for the term “exhaustion” can be found on page 18 at line 14.

No where in Hall-Tipping is it suggested that the user be exercised to the point where the at least one parameter varies differently than before. In fact, Hall-Tipping specifically avoids exercising the user to a point where exhaustion or inefficiency can occur. In Col. 5, at Lines 60-63, Hall-Tipping states that they are encouraging “an exerciser to stay above the minimum recommended aerobic level, but at the same time not exceed the maximum aerobic level.” Hall-Tipping trains the subject within a set range without determining how the subject’s body is reacting to the current training. Whereas, claim 1 and 17 require that the subject is trained until inefficiency or in other words, past the point of efficiency, where said point of efficiency occurs just prior to the trainable subject no longer being able to accommodate additional stress and entering a state of inefficiency or exhaustion causing the at least one parameter to vary differently than before. Claims 1 and 17 require that a subject is trained until the at least one parameter, which is monitored throughout the training, varies differently than before. Typically what this means is that the parameter was varying linearly and that changes. Either the parameter begins to vary along a different line or it varies non-linearly. This is caused as the subject can no longer accommodate additional stress or the subject has hit exhaustion. Hall-Tipping simply discloses that a subject is trained within a given range for a predetermined amount of time.

Therefore, claims 1 and 17 are patentable over Hall-Tipping.

Stratton et al. discloses a testing method for testing the age associated decline in cardiovascular performance. Stratton discloses a training method in which the 6-month training program begins at 50% to 60% of heart rate reserve and increases to 80% to 85% by the third-fourth month and continues at that level for the remaining time. See page 1649 of Stratton et al.. A testing method was also utilized which had the subjects bike for four to five minutes. Then exercise started at 200 kpm and increased by 200 kpm every 3 minutes until the subject was stopped by exhaustion. Data collection was conducted during this period. See page 1649 of Stratton et al. This, however, was a testing method and not a training method.

Stratton et al., like Hall-Tipping, does not disclose a point of efficiency being used in the training process, where the point of efficiency occurs just prior to the trainable subject no longer being able to accommodate additional stress or exhaustion causing the at least one parameter to vary differently than before. Instead, the training method in Stratton et al. takes predetermined percentages of the subject's heart rate reserve and trains the subject at those levels.

Whereas, the present method, as disclosed in claims 1 and 17, allows for the subject's fitness or training to be reevaluated each time the subject trains. Each time the subject uses the method, a new point of efficiency is determined. The next time the subject trains, the previous point of efficiency is used as a benchmark. The subject then trains until the at least one parameter varies differently than before. Typically what this means is that the parameter was varying linearly and that changes. Either the parameter begins to vary along a different line or it varies non-linearly. This is caused as the subject can no longer accommodate additional stress or the subject has hit exhaustion.

While, Stratton et al. does teach exhaustion as the end to the testing method. Stratton et al. does not teach a parameter varying differently than before. Also, Stratton et al. never asserts the testing method as a training method. Therefore, Stratton et al. fails to remedy the deficiencies of the Hall-Tipping patent.

Applicant believes that these amendments and arguments place independent claims 1 and 17 in condition for allowance. Dependent claims 4-8 and 18-20 are patentable because they depend from allowable claims 1 and 17.

### **CONCLUSION**

Based on the preceding arguments, Applicant respectfully believes that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 19-0513.

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